

IN THE CLAIMS

Please amend the claims as follows:

1. (original) A sensor array with at least two sub-bridges, which are coupled together to form at least one Wheatstone bridge and which are equipped, in each of the sub-bridges, with at least two magnetoresistive sensor elements, wherein the sensor elements are sensitive to the magnetic field strength of an applied magnetic field along a measurement direction, and the sub-bridges are designed to deliver a measurement signal as a function of a field component of the magnetic field, designated a measurement field, measured in the measurement direction, wherein, further, in a first of the sub-bridges at least two of the sensor elements exhibit barber pole structures with differing alignments, in a second of the sub-bridges at least two of the sensor elements are designed without barber pole structures, and the measurement signals of the first sub-bridge at least largely coincide with the measurement signals of the second sub-bridge in a specified range of values around a zero point of the magnetic field strength of the measurement field.

2. (original) A sensor array as claimed in claim 1, characterized in that the location coordinates of the sensor elements of the

first sub-bridge and the location coordinates of the sensor elements of the second sub-bridge along a coordinate axis running in the measurement direction are selected to differ from each other to a predetermined degree.

3. (currently amended) A sensor array as claimed in claim 1 ~~or 2~~, characterized in that the measurement field is non-homogeneous at least in the measurement direction.

4. (currently amended) A sensor array as claimed in claim 1, ~~2 or 3~~, characterized in that the applied magnetic field is generated by an auxiliary magnet designed as a permanent magnet.